OMC

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20 January 1997

RECD
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M.E.B

Mr. Lawrence Schmitt
Remedial Project Manager
U.S. Environmental Protection Agency
77 W. Jackson Boulevard SR-6J
Chicago, IL 60604-3590

RE: Waukegan Harbor Remedial Action
Transmittal of Revised Operations & Maintenance Plan

Dear Larry:

Enclosed are two copies of a comprehensive revision to the Operations and Maintenance Plan for the Waukegan Harbor site for US EPA review, comment, and approval. Due to the number of changes made, including format, organization, and new text additions, printing a "redline/strikeout" version of the text was not helpful. Instead, the attached table summarizes the major changes made to the document. The Health and Safety Plan (Appendix B) will be transmitted separately. If you have any questions, please feel free to call me at 847/689-5228 or Roger Crawford at 847/689-5219.

Sincerely,

Tricia Sutton
Senior Environmental Specialist
Manager - Remediation

enclosures

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c: Aaryn Albrecht, CDI
Howard Chinn, IAG
Joe Moran, OMC (w/out encl.)
Sean Mulroney, USEPA (C29A)
Jim MacMorran, USCOE
Steve Willey, USDOJ
Jerry Willman, IEPA

SUMMARY OF REVISIONS

OPERATIONS AND MAINTENANCE PLAN
VERSION 1, JANUARY 20, 1997
WAUKEGAN HARBOR SUPERFUND REMEDIAL ACTION

SECTION	CHANGE
General/Throughout text	Updated to reflect post-construction site conditions, eliminated options that no longer apply (e.g., references to the B.E.S.T. process that was not selected for the site), made editorial changes for reading clarity and grammar (e.g., present vs. future verb tense).
1.0 Introduction	Expanded to include an overview of the remedial action, the components of operation and maintenance, the temporary designated soil stockpile. Included a summary list of modifications made in this revision.
2.0 Maintenance and Inspection of Final Cover	Deleted reference to the first two years inspection schedule since they are now past. Revised fertilization schedule to allow more flexibility in maintenance of vegetation and relate it to the annual inspection. For example, it is sometimes better to fertilize in the fall to assure better root formation than to fertilize in the spring. Also, if the vegetation is healthy and thriving, regular fertilizing may not be desired and fertilization as needed reduces the potential runoff to the Harbor and Lake (pollution prevention). The need to fertilize can be evaluated annually and still assure the cover is maintained adequately.
3.0 Groundwater Monitoring	Subdivided section to separate procedures and requirements for groundwater elevation measurements, groundwater sampling, and well maintenance. (Old section 3.1 now 3.3.) Added a table of the background analyses for the groundwater monitoring wells.

SECTION	CHANGE
(3.0 continued)	Moved detailed procedures into a Quality Assurance Project Plan (QAPP) specifically written for O&M. Although there was a QAPP for the construction phase, it included many things not related to O&M and did not include many of the routine, ongoing procedures used for O&M.
3.1 Groundwater Elevations	Incorporated procedures from old plan; referenced QAPP procedures; clarified use of water level readings.
3.2 Groundwater Sampling, Analysis, and Notifications	Added a description of the purpose of the three compliance programs: detection monitoring, compliance monitoring, and corrective action. Referenced QAPP and moved sampling groundwater procedures into the QAPP (updating for current procedure). Deleted reference to B.E.S.T. solvent extraction process since it was not used in the remedial action. Clarified and updated detection monitoring procedures as follows: • Maintained the paragraph numbering format from the original plan because of the correspondence history that refers to the paragraph numbers. • Updated analytical method references. • Clarified the three previous assessment criteria based on questions raised in the past. • Added an assessment criteria to allow monitoring frequency to be modified to annual based on consistent sampling results. • Added a clarification on the use of resampling data in the monitoring data record. • Made reporting time triggers consistent for detection and compliance monitoring (made all references 30 days instead of 4 weeks).

SECTION	CHANGE
(3.2 Continued)	Clarified compliance monitoring and expanded options to include other types of assessment activities to allow flexibility in evaluating occurrences and to kept current with technology advances. Clarified sampling notice requirements and resampling schedule.
3.3 Monitoring Well Maintenance	Moved annual well inspection/sounding here from earlier in section. Made inspection procedure more flexible to allow use of other types of sounding equipment. Revised well maintenance procedures to reflect current practice.
4.0 Groundwater Extraction, Treatment, and Discharge	Subdivided section to separate operation, sampling, and maintenance. Added general description of the features of the new treatment systems. Added a copy of the manufacturer's operation manual (Appendix C) to provide details on new systems' features.
4.1 Treatment System Operation	Described differences between the treatment systems at each containment cell. Clarified frequency of operation and incorporated discharge requirements into this section.
4.2 Treatment System Sampling Frequency	Clarified and proposed modifications to treatment system sampling frequency for long-term operation based on sampling history. Removed references to testing for the first system started since that testing work is complete. Updated projections of time to breakthrough based on operational history (Appendix D).

SECTION	CHANGE
(4.2 Continued)	Defined 'startup' sampling as occurring with in 2 days of restarting to provide flexibility and to help assure that the sample represents water from the cell that has been newly processed (i.e., that enough volume of water was processed to 'flush' system rather than risking sampling of stagnant water left in the systems during a shutdown).
4.3 Recovery Well and Water Treatment System Maintenance	Expanded and revised recovery well maintenance procedures to reflect preferred practice and to provide flexibility to keep current with well maintenance practices of the industry. Expanded and clarified the periodic inspection of treatment systems based on the new systems' features. Added the total residual chlorine measurement and discharge standard. Incorporated the startup hydraulic testing into this section and revised to reflect preferred procedure for the new treatment systems.
5.0 Reporting	Modified reporting schedule to the preferred approach of streamlining ongoing reporting into the quarterly reports.
Tables	Table 1 - Completed bituminous and vegetative cover areas since completion of the cells. Table 2 - New
Figures	Figure 1 - Added general site location map. Figure 2 - Revised to reflect record of construction features. Figures 3-5 - Added detailed site plans for each containment cell with record of construction information on topography, well locations, utility locations, and treatment building locations.

Summary of Revisions, O&M Plan 1/20/97

SECTION	CHANGE
Appendix A	Replaced record keeping procedures with a full QAPP specifically tailored for O&M. Incorporated sampling and analysis procedures plus data validation review procedures into QAPP.
Appendix B	Moved Treatment System Sampling Frequency to Appendix D. Added a Health and Safety Plan (HASP) specifically written for Operations and Maintenance since the HASP for construction was too extensive to be useful for O&M and some routine O&M activities were not well addressed. This HASP is being finalized with OMC corporate health and safety staff and will be transmitted separately in the interest of not delaying submittal of the overall O&M Plan revisions.
Appendix C	New. Added an example manufacturer's operation manual for the new fixed systems. The 400 pound size system manual was included because the three systems are equivalent except for the carbon vessel size and the maximum flow rate. The smaller system manual was included because it would be the most limiting system.
Appendix D	Moved from previous Appendix B. Updated the calculations based on actual operating experience and history.
Appendix E	New. Added containment volume calculations for the new systems.
Appendix F	New. Added temporary designated soil stockpile O&M requirements to make the O&M Plan stand alone. These requirements were previously present in appendices of the design documents and correspondence. Clarified and updated the procedures to reflect current practice.